

# Permit to Operate

**FACILITY:** S-1133

**EXPIRATION DATE:** 02/28/200

**LEGAL OWNER OR OPERATOR:** WESTERN MIDWAY COMPANY

**MAILING ADDRESS:** P O BOX 147  
BAKERSFIELD, CA 93302

**FACILITY LOCATION:** HEAVY OIL CENTRAL  
, CA

**FACILITY DESCRIPTION:** OIL AND NATURAL GAS PROD. \*\*\*PTO'S TRANSFERED TO S-1109\*\*\*

The Facility to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

The Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

**DAVID L. CROW**  
Executive Director / APCO

**Seyed Sadredin**  
Director of Permit Services

**Initial TV Permit**  
**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-5-0

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

4.2 MMBTU/HR NATIONAL HEATER TREATER, LEASE FEE A. THIS HEATER TREATER AND UNITS 10 AND 13, ALL CANCELED IN 1993 RENEWALS - MRB.

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
  2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
  3. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301]
  4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
  5. Fuel oil sulfur content shall not exceed 1.10% by weight. [ ]
  6. Sulfur content of natural gas used as fuel shall not exceed 0.5 gr 100 scf. [ ]
  7. District shall be notified prior to switching to fuel oil firing. [ ]
  8. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081]
  9. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081]
  10. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]
  11. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
  12. Records required by this permit shall be retained on site for a period of at least two years and shall be made readily available for District inspection upon request. [ ]
  13. Emission sampling limits for this unit shall not exceed the following: PM-10 - 0.39 lb/hr, SO<sub>2</sub> - 4.95 lb/hr, NO<sub>2</sub> - 1.68 lb/hr, VOC - 0.03 lb/hr, and CO - 0.14 lb/hr. [ ]
  14. Compliance with oxides of nitrogen emission limit shall be demonstrated by District-witnessed sample collection by independent testing laboratory annually 60 days prior to permit anniversary date. [ ]
  15. Compliance with SO<sub>2</sub> emission limit shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually 60 days prior to permit anniversary date. [ ]
  16. Official test results and field data shall be submitted to District within 60 days after collection. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-6-8

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

25.2 MMBTU/HR NATIONAL GAS-FIRED STEAM GENERATOR #12, WITH AMETEK THERMOX O2 CONTROLLER.  
OVERLAND/RIO KERN LEASE - DELETED IN PROJECT #940727 BY YHH, 2/28/95

**PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
  2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
  3. Steam generator firebox convection section and all flue gas ductwork shall be maintained "leak free". [ ]
  4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
  5. This unit shall be fired on vapor control gas or Public Utility Commission (PUC) regulated natural gas only. [ ]
  6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
  7. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
  8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
  9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
  10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
  11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
  12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
  13. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
  14. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
  15. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
  16. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
  17. Emission factors for this unit shall not exceed the following: PM-10 - 0.069 lb/MMBTU, SOx (as SO2) - 0.184 lb/MMBTU, NO2 - 0.080 lb/MMBTU, VOC - 0.007 lb/MMBTU, and CO - 0.033 lb/MMBTU. [ ]
  18. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SOx (as SO2) - 1985.50 lb/day, NO2 - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
  19. For this emission unit the overall throttle and use factor used in the SLC plan is 64%. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-7-11

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

25.2 MMBTU/HR NATIONAL GAS-FIRED STEAM GENERATOR #5, WITH AMETEK THERMOX O2 CONTROLLER. LEASE FEE B - DELETED IN PROJECT #940727 BY YHH, 2/28/95

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
  2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
  3. Steam generator firebox convection section and all flue gas ductwork shall be maintained "leak free". [ ]
  4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
  5. This unit shall be fired on vapor control gas or Public Utility Commission (PUC) regulated natural gas only. [ ]
  6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
  7. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
  8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
  9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
  10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
  11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
  12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
  13. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
  14. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
  15. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
  16. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
  17. Emission factors for this unit shall not exceed the following: PM-10 - 0.069 lb/MMBTU, SOx (as SO2) - 0.184 lb/MMBTU, NO2 - 0.080 lb/MMBTU, VOC - 0.007 lb/MMBTU, and CO - 0.033 lb/MMBTU. [ ]
  18. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SOx (as SO2) - 1985.50 lb/day, NO2 - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
  19. For this emission unit the overall throttle and use factor used in the SLC plan is 64%. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-12-8

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

25.2 MMBTU/HR NATIONAL GAS-FIRED STEAM GENERATOR #6, WITH AMETEK THERMOX O2 CONTROLLER. LEASE FEE B - DELETED IN PROJECT #940727 BY YHH, 2/28/95

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
  2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
  3. Steam generator firebox convection section and all flue gas ductwork shall be maintained "leak free". [ ]
  4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
  5. This unit shall be fired on vapor control gas or Public Utility Commission (PUC) regulated natural gas only. [ ]
  6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
  7. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
  8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
  9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
  10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
  11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
  12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
  13. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
  14. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
  15. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
  16. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
  17. Emission factors for this unit shall not exceed the following: PM-10 - 0.069 lb/MMBTU, SOx (as SO2) - 0.184 lb/MMBTU, NO2 - 0.080 lb/MMBTU, VOC - 0.007 lb/MMBTU, and CO - 0.033 lb/MMBTU. [ ]
  18. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SOx (as SO2) - 1985.50 lb/day, NO2 - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
  19. For this emission unit the overall throttle and use factor used in the SLC plan is 64%. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-13-0

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

4.2 MMBTU/HR HEATER TREATER. THIS PTO CANCELED WITH 1993 RENEWALS - MRB.

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule]
4. If continuous operation oxygen analyzer/controller is utilized, excess O<sub>2</sub> shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
5. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
6. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081]
7. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]
8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
10. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
11. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
13. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
14. For units equipped with continuous emissions monitors (CEMs), CEM records shall be used in place of calculated emissions. [District NSR Rule]
15. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
16. Permittee shall submit compliance testing plan to the District prior to annual permit expiration date. [ ]
17. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
18. Emission factors shall not exceed PM<sub>10</sub>: 0.075 lb/MMBtu, SO<sub>x</sub> (as SO<sub>2</sub>): 0.180 lb/MMBtu, NO<sub>x</sub> (as NO<sub>2</sub>): 0.080 lb/MMBtu, VOC: 0.007 lb/MMBtu, and CO: 0.033 lb/MMBtu. [ ]
19. For this emission unit the overall throttle and use factor used in the SLC plan is 64 %. [ ]
20. When 3 MSEC cogens are operating and 6 SG's are shutdown emission rates for all units subject to SLC shall not exceed PM<sub>10</sub>: 1,605.2 lb/day, SO<sub>x</sub> (as SO<sub>2</sub>): 2,823.7 lb/day, NO<sub>x</sub> (as NO<sub>2</sub>): 7,706.8 lb/day, VOC: 757.6 lb/day, and CO: 7,256.6 lb/day. [ ]
21. When 2 MSEC cogens are operating and 6 SG's are operating emission rates for all units subject to SLC shall not exceed PM<sub>10</sub>: 1,826.3 lb/day, SO<sub>x</sub> (as SO<sub>2</sub>): 3,377.5 lb/day, NO<sub>x</sub> (as NO<sub>2</sub>): 7,478.7 lb/day, VOC: 595.7 lb/day, and CO: 5192.9 lb/day. [ ]

## Initial TV Permit

22. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
23. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
24. Gas turbine shall be fired exclusively with PUC regulated natural gas or natural gas documented to be of comparable quality. [ ]
25. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [ ]
26. Exhaust gas sulfur compound concentration shall not exceed 150 ppmvd @ 15% O<sub>2</sub>. [ ]
27. Oxides of nitrogen concentration at exhaust shall not exceed 200 ppmv at 15% excess oxygen and dry basis. [ ]
28. Gas turbine engine shall be equipped with water injection system for NO<sub>x</sub> control. [ ]
29. Gas turbine engine water injection rate shall be maintained such that water to fuel ratio is no less than that amount determined necessary to ensure emission limits compliance. [ ]
30. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [ ]
31. If water injection system is inoperative, gas turbine engine shall be shut down, except as allowed under District Rule 1100. [ ]
32. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas sample consistent with EPA test methods. [ ]
33. All steam produced by this source operation shall be used only in existing TEOR operation(s) served by existing vapor control system(s). [ ]
34. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
35. Heat recovery steam generator shall receive combustion air only from gas turbine exhaust. [ ]
36. Emissions increases from new wells in zone steamed by this equipment shall be controlled and mitigated as required by Rules 2201 and 4401. [ ]
37. ARCO shall comply in full with Rule 4001, New Source Performance Standards, subpart GG requirements. [ ]
38. Source testing shall be conducted for at least three levels of operating range of water to fuel ratio to demonstrate previously established ratio correlation with NO<sub>x</sub> emissions remains valid. [ ]
39. Compliance with particulate matter (PM-10), sulfate, nitrogen oxide, VOC, and CO emission limits shall be demonstrated by District-witnessed sample collection by independent testing laboratory within 60 days prior to permit anniversary date. [ ]
40. Compliance with sulfur dioxide emission limits shall be demonstrated by fuel gas sulfur analysis performed by independent testing laboratory of fuel gas samples taken at time of stack gas sampling. [ ]
41. Source test results and fuel test data from Conditions 18 and 19 shall be submitted within 60 days after sample collection with water to fuel injection ratio, on mass basis, determined at time of stack gas sampling. [ ]
42. ARCO shall keep accurate daily records of turbine water to fuel injection ratio and such records shall be made readily available for District inspection upon request. [ ]
43. ARCO shall keep accurate daily records of fuel consumption and fuel sulfur and nitrogen contents and such records shall be made readily available for District inspection upon request. [ ]
44. ARCO shall keep accurate daily records of gas turbine exhaust NO<sub>x</sub> and oxygen concentrations and such records shall be made readily available for District inspection upon request. [ ]
45. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
46. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
47. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
48. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
49. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]

## Initial TV Permit

50. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
51. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
52. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
53. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
54. Permittee shall submit compliance testing plan to the District prior to annual permit expiration date. [ ]
55. Emission factors for this unit shall not exceed the following: PM-10 - 0.015 lb/MMBTU, SO<sub>x</sub> (as SO<sub>2</sub>) - 0.003 lb/MMBTU, NO<sub>2</sub> - 0.225 lb/MMBTU, VOC - 0.016 lb/MMBTU, and CO - 0.074 lb/MMBTU. [ ]
56. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SO<sub>x</sub> (as SO<sub>2</sub>) - 1985.50 lb/day, NO<sub>2</sub> - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
57. For this emission unit the overall throttle and use factor used in the SLC plan is 100%. [ ]



**Initial TV Permit**  
**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-14-11

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

25.2 MMBTU/HR STRUTHERS GAS-FIRED STEAM GENERATOR #42, WITH AMETEK THERMOX O2 CONTROLLER.  
LEASE FEE A - DELETED IN PROJECT #940727 BY YHH, 2/28/95

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
  2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
  3. Steam generator firebox convection section and all flue gas ductwork shall be maintained "leak free". [ ]
  4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
  5. This unit shall be fired on vapor control gas or Public Utility Commission (PUC) regulated natural gas only. [ ]
  6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
  7. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
  8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
  9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
  10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
  11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
  12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
  13. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
  14. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
  15. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
  16. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
  17. Emission factors for this unit shall not exceed the following: PM-10 - 0.153 lb/MMBTU, SOx (as SO2) - 0.184 lb/MMBTU, NO2 - 0.080 lb/MMBTU, VOC - 0.014 lb/MMBTU, and CO - 0.068 lb/MMBTU. [ ]
  18. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SOx (as SO2) - 1985.50 lb/day, NO2 - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
  19. For this emission unit the overall throttle and use factor used in the SLC plan is 64%. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-17-7

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

25.2 MMBTU/HR NATIONAL GAS-FIRED STEAM GENERATOR #7 WITH NORTH AMERICAN BURNER ASSEMBLY.  
NUKERN LEASE - DELETED IN PROJECT #940727 BY YHH, 2/28/95

## **PERMIT UNIT REQUIREMENTS**

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. Steam generator firebox convection section and all flue gas ductwork shall be maintained "leak free". [ ]
4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
5. This unit shall be fired on vapor control gas or Public Utility Commission (PUC) regulated natural gas only. [ ]
6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
7. If continuous operation oxygen analyzer/controller is utilized, excess O<sub>2</sub> shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
13. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
14. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
15. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
16. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
17. Emission factors for this unit shall not exceed the following: PM-10 - 0.093 lb/MMBTU, SO<sub>x</sub> (as SO<sub>2</sub>) - 0.184 lb/MMBTU, NO<sub>2</sub> - 0.080 lb/MMBTU, VOC - 0.007 lb/MMBTU, and CO - 0.033 lb/MMBTU. [ ]
18. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SO<sub>x</sub> (as SO<sub>2</sub>) - 1985.50 lb/day, NO<sub>2</sub> - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
19. For this emission unit the overall throttle and use factor used in the SLC plan is 64%. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-19-8

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

27.5 MMBTU/HR STRUTHERS GAS-FIRED STEAM GENERATOR #9, WITH AMETEK THERMOX O2 CONTROLLER.  
CORK LEASE - DELETED IN PROJECT #940727 BY YHH, 2/28/95

## **PERMIT UNIT REQUIREMENTS**

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
  2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
  3. Steam generator firebox convection section and all flue gas ductwork shall be maintained "leak free". [ ]
  4. All combustion equipment (burner, combustion air controls, fuel preheating and atomizing equipment. etc.) shall be operated and maintained as intended by manufacturer. [ ]
  5. This unit shall be fired on vapor control gas or Public Utility Commission (PUC) regulated natural gas only. [ ]
  6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401]
  7. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [ ]
  8. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]
  9. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]
  10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available set equal to the average of four days prior to failure and permittee shall meet the requirements of Rule 1100 for CEM's. [ ]
  11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
  12. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]
  13. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]
  14. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]
  15. For units equipped with continuous emissions monitors (CEMs), CEM data may be used in place of calculated emissions. If CEM shows a violation, CEM data shall be used. [ ]
  16. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]
  17. Emission factors for this unit shall not exceed the following: PM-10 - 0.068 lb/MMBTU, SOx (as SO2) - 0.184 lb/MMBTU, NO2 - 0.080 lb/MMBTU, VOC - 0.007 lb/MMBTU, and CO - 0.032 lb/MMBTU. [ ]
  18. Total combined emissions from all permit units in SLC plan shall not exceed the following: PM-10 - 820.10 lb/day, SOx (as SO2) - 1985.50 lb/day, NO2 - 2979.06 lb/day, VOC - 150.05 lb/day, and CO - 797.93 lb/day. [ ]
  19. For this emission unit the overall throttle and use factor used in the SLC plan is 64%. [ ]

**Initial TV Permit**

**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT:** S-1133-28-8

**EXPIRATION DATE:** 02/28/2003

**EQUIPMENT DESCRIPTION:**

STEAM-ENHANCED CRUDE OIL PROD. WELL OP. CO-1, CO-2, CO-3 & CO-4, SERVING 79 STEAM ENHANCED WELLS. NON CONDENSIBLE VAPORS PIPED TO INCINERATING S.G.'S S-1133-4, 6, 9, 11, 15, 16 & 19. COMET LEASE.(CANCEL PER -27-7; ANNUAL FEES APPLIED TO -28-8)

## **PERMIT UNIT REQUIREMENTS**

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1. Operation shall include 17 pressure type gas/liquid separators, free condensate knock-out vessels, primary knock-outs, compressor discharge knock-outs & one water cooled heat exchanger. [ ]
2. Operation shall include 4 sets of air-cooled heat exchangers, 5 compressors, and 4 pressure-type condensate storage tanks. [ ]
3. Operation shall include 4 open-top emergency drain tanks & non condensibles piping from well vents to the 7 approved incinerating steam generators, and vapor compressor bypass piping. [ ]
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold. [ ]
6. A listing of all steam enhanced wells connected to this system shall be submitted to the District at least 60 days prior to the permit anniversary date. [District NSR Rule]
7. All components of well vent vapor collection and control systems shall be maintained in good working condition. [District Rule 4401]
8. Casing vent vapor collection piping shall be interconnected such that flow can be directed to all parts of system. [ ]
9. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401]
10. Total number of leaks shall not exceed that allowed by Rule 4401. [ ]
11. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 4401]
12. If non-condensibles incineration sources are inoperative, casing vapors shall not be vented to atmosphere. [ ]
13. Vapor compressors shall be designed for: one 154 scfm, two 76 scfm, one 139 scfm and one 30 scfm @ 30 psig and 130 Deg F. @ suction and 10 psig and 275 Deg F. @ discharge. [ ]
14. Block valve upstream of free condensate knockout shall activate and shut in casing vapor at 40 psig system pressure. [ ]
15. Non-condensibles shall be introduced to gas section of dual burners of steam generators for incineration. [ ]
16. VOC emissions from this operation shall not exceed 7.78 lb/hr. [ ]

## Initial TV Permit